

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
 (Chapter II of the Patent Cooperation Treaty)

REC'D 10 FEB 2006

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference <b>2040249PC/or</b>	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416																									
International application No. <b>PCT/FI2005/050022</b>	International filing date ( <i>day/month/year</i> ) <b>10 - 02 - 2005</b>	Priority date ( <i>day/month/year</i> ) <b>13 - 02 - 2004</b>																								
International Patent Classification (IPC) or national classification and IPC See Supplemental Box																										
Applicant <b>Futurice Oy et al</b>																										
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of <u>8</u> sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <table style="margin-left: 20px; border-collapse: collapse;"> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>			<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand <b>21-11-2005</b>	Date of completion of this report <b>31-01-2006</b>
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer <b>Oskar Pihlgren/MN</b> Telephone No. +46 8 782 25 00

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

International application No.

PCT/FI2005/050022

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Cover sheet

**INTERNATIONAL PATENT CLASSIFICATION (IPC) :**

**G06Q 30/00 (2006.01)**

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI2005/050022

## Box No. I Basis of the report

1. With regard to the language, this report is based on:

- the international application in the language in which it was filed  
 a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of:  
 international search (Rules 12.3(a) and 23.1(b))  
 publication of the international application (Rule 12.4(a))  
 international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- the international application as originally filed/furnished  
 the description:

pages 1 - 21 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- the claims:

pages \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ as amended (together with any statement) under Article 19

pages\* 22 - 29 received by this Authority on 21 - 11 - 2005

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- the drawings:

pages 1 - 5 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

- the description, pages \_\_\_\_\_  
 the claims, Nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages \_\_\_\_\_  
 the claims, Nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseeded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/FI2005/050022

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## 1. Statement

Novelty (N)	Claims	<u>1-27</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1-27</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1-27</u>	YES
	Claims	_____	NO

## 2. Citations and explanations (Rule 70.7)

## Documents cited in the International Search Report:

D1: US 20020054059 A1

D2: US 20020120757 A1

D3: US 6636259 B1

D4: About Fotki. Datasheet [online]. Fotki, 1998 [retrieved on 2005-05-11]. Retrieved from the Internet: <URL: <http://about.fotki.com>>.

D5: US 20040070678 A1

D6: US 20040111415 A1

D7: WO 2004100042 A2

The cited documents represent the general state of the art. The invention defined in claims 1-27 is not disclosed by any of these documents.

The cited prior art does not give any indication that would lead a person skilled in the art to the claimed method and system for using person based metadata in data processing. Therefore, the claimed invention is not obvious to a person skilled in the art.

Accordingly, the invention defined in claims 1-27 is novel and is considered to involve an inventive step. The invention is industrially applicable.

AMENDED CLAIMS

1. A data processing system (20) comprising:  
a unit (29) for producing data elements;  
data processing means (21) for processing data elements;  
a first database (22) with at least part of its records containing the name information of a subscriber of a telecommunications system and the subscriber's address in the telecommunications system; and

interface means (26) containing output means (27) for outputting information to the user and input means (28) for receiving as input information from the user;

said output means (27) are arranged to output to the user at least a part of the content of a data element and at least one selection option for selecting the name information of a subscriber for attaching person-based metadata to the data element;

said input means (28) are arranged to receive as input from the user said selection of a subscriber's name information;

**c h a r a c t e r i z e d** in that

said data processing means (21) are, in response to the name selection by the user, arranged to fetch the subscriber address in the telecommunications system related to the selected name information from the first database; and to attach to the data element metadata that contains the fetched subscriber address in the telecommunications system, and

the system also comprises a database system for storing data elements, the database system comprising a server (53) and a second database (51), said server (53) being arranged to receive a fetch request for a data element from a computer (56) connected to the server; and to check the access right to the data element on the basis of the subscriber address in the telecommunications system attached to the fetch request.

2. A data processing system as claimed in claim 1, **c h a r a c t e r i z e d** in that said output means (27) are arranged to output a selection view that contains at least a part of the name information in the first database.

3. A data processing system as claimed in claim 2, **c h a r a c t e r i z e d** in that

said output means (27) are also arranged to provide the user with the option of attaching to the data element an additional definition controlling its access right;

said input means (28) are arranged to receive as input from the user said additional definition;

said data processing means (21) are arranged to attach said additional definition to the data element.

4. A data processing system as claimed in claim 2, **characterized** in that

said output means (27) are also arranged to provide the user with the option of attaching to the data element an additional definition controlling a function to be implemented during its storage;

said input means (28) are arranged to receive as input from the user said additional definition;

said data processing means (21) are arranged to attach said additional definition to the data element.

5. A data processing system as claimed in claim 4, **characterized** in that the server (53) is arranged to receive said additional definition; and, in response to the received additional definition, to execute during storage the function defined by the additional definition.

6. A data processing system as claimed in claim 5, **characterized** in that said function includes transmitting the data element to the subscriber identified by the address in the telecommunications system comprised in the person-based metadata.

7. A data processing system as claimed in any of claims 1 to 6, **characterized** in that the system also comprises a clock unit (81) for defining the generation time of the data element, the clock unit (81) being also arranged to

attach to the data element metadata containing a data series identifier;

measure a time interval between two data elements;

compare the time interval with a predefined reference value;

attach, in response to undershooting the reference value, to the later data element the same identifier as to the earlier data element; and

attach, in response to exceeding the reference value, to the later data element a different identifier than to the earlier data element.

8. A data processing system as claimed in any of claims 1 to 7, characterized in that the system also comprises a calendar unit (82), the calendar unit being also arranged to:

detect the generation time of the data element;  
fetch a calendar event corresponding to the generation time;  
attach to the data element metadata containing said calendar event.

9. A data processing system as claimed in any of claims 1 to 8, characterized in that the system also comprises a positioning unit (83), the positioning unit being also arranged to:

generate location information on a system element containing the positioning unit at the generation time of the data element;

attach to the data element metadata containing said location information.

10. A data processing system as claimed in any one of the preceding claims, characterized in that said data elements contain image data.

11. A mobile station (20) comprising:

a unit (29) for producing data elements;

data processing means (21) for processing data elements;

interface means (26) containing output means (27) for outputting information to the user and input means (28) for receiving as input information from the user;

a phone list (22) with at least part of its records containing name information of subscribers of a mobile communications system, a record of name information of a subscriber comprising a name part including a subscriber's name in a form input by the user of the mobile station, and an address part including at least the subscriber's address in the mobile communications system;

characterized in that

said output means (27) are arranged to output to the user at least a part of the content of a data element and a view to name part of the phone list for selecting the subscriber's name in a form input by the user of the mobile station, for attaching person-based metadata to the data element;

said input means (28) are arranged to receive as input from the user a selected subscriber's name in a form input by the user of the mobile station;

said data processing means (21) are, in response to the selection of the subscriber's name, arranged to fetch the subscriber address in the mobile communications system related to the selected subscriber's name from the first database, and to attach to the data element metadata that contains the fetched subscriber address at least in the mobile communications system.

12. A method for data processing in a system, in which a data element is generated, and records are maintained in a first database, and at least part of the records of the first database comprise name information of a subscriber of a telecommunications system and the subscriber's address in the telecommunications system,

outputting (42) to the user with at least a part of the content of the data element and the option of selecting at least one subscriber's name information for attaching person-based metadata to the data element;

receiving as input (43) from the user said subscriber's name information selection;

**c h a r a c t e r i z e d by**

fetching (44), in response to the user's selection, the address of the subscriber in the telecommunications system related to the selected name information from the first database;

attaching (45) to the data element metadata that contains the fetched subscriber address in the telecommunications system;

storing (104) data elements into a database system connected to the system, the database system comprising a server and database; and

receiving (101) a data element fetch request from a computer connected to the server; and checking the access right to the data element on the basis of the subscriber address in the telecommunications system attached to the fetch request.

13. A method as claimed in claim 12, **c h a r a c t e r i z e d** by providing a selection view containing at least a part of the name information in the first database.

14. A method as claimed in claim 13, **c h a r a c t e r i z e d** by also providing the user with the option of attaching to the data element an additional definition controlling its access right;

receiving (95) as input from the user said additional definition;

attaching (96) said additional definition to the data element.

15. A method as claimed in claim 13, **characterized by** also providing the user with the option of attaching to the data element an additional definition controlling a function executed during the storage of the data element;

receiving as input (95) from the user said additional definition; attaching (96) said additional definition to the data element.

16. A method as claimed in claim 15, **characterized by** receiving (101) to the server said additional definition; and, in response to the received additional definition, executing (106) said function during storage.

17. A method as claimed in claim 16, **characterized by** executing (106) said function by transmitting the data element to the subscriber identified by the subscriber address in the telecommunications system contained in the person-based metadata.

18. A method as claimed in any of claims 14 to 17, **characterized by**

defining the generation time of the data element;

attaching to the data element metadata containing an identifier that identifies a data series to which the data element belongs;

measuring a time interval between two data elements;

comparing the time interval with a predefined reference value;

attaching, in response to undershooting the reference value, to the later data element the same identifier as to the earlier data element; and

attaching, in response to exceeding the reference value, to the later data element a different identifier than to the earlier data element.

19. A method as claimed in any of claims 14 to 18, **characterized by**

detecting the generation time of the data element;

fetching a calendar event corresponding to the generation time;

attaching to the data element metadata containing said calendar event.

20. A method as claimed in any of claims 14 to 19, **characterized by**

generating the location information of the system element that generated the data element at the generation time of the data element;

attaching to the data element metadata containing said location information.

21. A software product of a computer, **characterized** in that executing commands makes the computer to implement the steps of:

receiving a data element and person-based contextual metadata attached to the data element, the contextual metadata containing the address of at least one subscriber in a specific telecommunications system;

checking whether an additional definition controlling the access right of the data element is attached to the received data element;

executing said function in response to the fact that an additional definition is attached.

22. A network element (20) of a telecommunications system, the network element comprising:

first interface means (23) for receiving data elements;

user interface means (26) for outputting information to the user and receiving as input information from the user;

second interface means (26) containing output means (27) for outputting information to the user and input means (28) for receiving as input information from the user;

**characterized** in that

the network element is connected to a first database for access to a phone list (22) with at least part of its records containing name information of subscribers of a mobile communications system, a record of name information of a subscriber comprising a name part including a subscriber's name in a form input by the user of the network element, and an address part including a subscriber's address in the mobile communications system;

said output means (27) are arranged to output to the user at least a part of the content of a data element and a view to name part of the phone list for selecting the subscriber's name in a form input by the user of the network element, for attaching person-based metadata to the data element;

said input means (28) are arranged to receive as input from the user a selected subscriber's name in the form input by the user of the network element;

said data processing means (21) are, in response to the selection by the user, arranged to fetch the subscriber's address in the mobile communications system related to the selected name information from the first database; and to attach to the data element metadata that contains the fetched subscriber address in the mobile communications system.

23. A database system of a telecommunications system, the database system comprising a database (62) and a server (60), **characterized** in that the server (60) comprises

first interface means (63, 64) for receiving a data element and person-based contentual metadata attached to the data element, the contentual metadata containing the address of at least one subscriber in a specific telecommunications system; and

data processing means (61) arranged to

check whether an additional definition controlling the access right of the data element is attached to the received data element;

execute said function in response to the fact that an additional definition is attached.

24. A database system as claimed in claim 23, **characterized** in that the data processing means (61) are further arranged to

check whether an additional definition controlling the access right of the data element is attached to the received data element;

control the access of the data element in response to the fact that an additional definition is attached.

25. A database system as claimed in claim 23 or 24, **characterized** in that the first interface means (63, 64) are arranged to

receive (120) a first data element;

receive (120) a second data element; and

the data processing means (61) are arranged to

read first metadata attached to the first data element and second metadata attached to the second data element;

check whether the first and second metadata simultaneously meet a specific combination rule;

combine, in response to the first and second metadata simultaneously meeting the specific combination rule, the first and second data element into a data set to be processed as one entity.

26. A database system as claimed in claim 25, **characterized** in that the combination rule of the data processing means is a functionality stored in the data processing means, and the data processing means are arranged to check the combination rule in response to receiving data elements.

27. A database system as claimed in claim 25, **c h a r a c t e r - i z e d** in that said interface means are arranged to receive the combination rule from the user.